

at a second side of the piston, each chamber of the cylinder being connected to a selection valve means adapted to feed fluid under pressure to the first chamber of the cylinder and to receive fluid at a lower pressure from the second chamber of the cylinder in order to raise the loader arm assembly or to feed fluid under pressure to the second chamber of the cylinder and receive fluid at a lower pressure from the first chamber of the cylinder to lower the loader arm assembly, first and second control valves, the first control valve movable between a first position in which passage of hydraulic fluid therethrough is prevented in one direction and a second position in which passage of hydraulic fluid therethrough is permitted, the second control valve movable between a first position in which passage of hydraulic fluid therethrough is prevented in both directions and a second position in which passage of hydraulic fluid therethrough is permitted, the first control valve being connected between the first chamber and the hydraulic accumulator and the second control valve being connected between the second chamber and a low pressure region, and there being a check valve connected between the first chamber and the selection valve means such that the check valve is normally closed to prevent fluid under pressure passing from the first chamber to the selection valve means, the check valve being responsive to hydraulic fluid pressure in the second chamber to open the check valve to permit fluid flow from the first chamber to the selection valve means when the second chamber is pressurized.

A2
3.(Amended) A system according to claim 1 wherein the hydraulic system includes a ride improvement means and wherein the control valves are electrically operated solenoid valves to which current is supplied by a manually operable switch means to cause operation of said ride improvement means when said control valves are positioned in their respective second positions.

A2 4.(Amended) A system according to claim 2 wherein the selection valve is provided

with a switch means to sense the position of the selection valve to close said second control valve when the arm is lowered and said control valves are open.

A3 6.(Amended) A system according to claim 1 wherein at least one of said

accumulator, control valves, check valve and connecting pipes are made of metal.

Please add the following claims:

A4 7. A hydraulic system having a ride improvement mode and for use on a wheeled loader having a forwardly extending loader arm assembly mounted adjacent a rear end of the wheeled loader, the hydraulic system comprising:

a hydraulic cylinder operatively connected to the loader arm for raising and lowering the loader arm, the hydraulic cylinder having a first chamber and a second chamber disposed on opposite sides of a piston;

a selection valve operatively connected to the hydraulic cylinder via a first line and a second line, the selection valve arranged to feed pressurized hydraulic fluid to the first chamber via the first line and to receive hydraulic fluid at a lower pressure from the second chamber via the second line in order to raise the loader arm assembly, the selection valve further arranged to feed pressurized hydraulic fluid to the second chamber via the second line and to receive hydraulic fluid at a lower pressure from the first chamber via the first line in order to lower the loader arm assembly;

an accumulator connected to the first feed line via a first control valve, the first control valve movable between a first position in which hydraulic fluid flow is permitted

only from the accumulator to the first feed line and a second position in which hydraulic fluid flow is permitted between the accumulator and the first feed line in both directions;

a low pressure area connected to the second feed line by a second control valve, the second control valve movable between a first position in which passage of hydraulic fluid between the second feed line and the low pressure area is prevented and a second position in which hydraulic fluid flow between the second feed line and the low pressure area is permitted in both directions; and

a check valve operatively connected to both the first and second feed lines, and responsive to pressure in the second feed line to open the first feed line between the hydraulic cylinder and the selection valve;

at
the first and second control valves when both shifted to the second positions arranged to provide a hydraulic suspension to the loader arm assembly.

8. The device of claim 7, wherein the check valve is arranged to permit raising of the loader arm assembly when the first and second control valves are both shifted to the second positions.

9. The device of claim 7, wherein the check valve is arranged to permit lowering of the loader arm assembly when the first and second control valves are both shifted to the second positions.

10. A hydraulic system having a ride improving hydraulic circuit and for use on a wheeled loader having a forwardly extending loader arm assembly mounted adjacent a rear end of the wheeled loader, the hydraulic system comprising:

a ride improving hydraulic circuit, the hydraulic circuit including:

- a hydraulic cylinder operatively connected to the loader arm for raising and lowering the loader arm, the hydraulic cylinder having a first chamber and a second chamber disposed on opposite sides of a piston;
- a selection valve operatively connected to the hydraulic cylinder via a first line and a second line, the selection valve arranged to feed pressurized hydraulic fluid to the first chamber via the first line and to receive hydraulic fluid at a lower pressure from the second chamber via the second line in order to raise the loader arm assembly, the selection valve further arranged to feed pressurized hydraulic fluid to the second chamber via the second line and to receive hydraulic fluid at a lower pressure from the first chamber via the first line in order to lower the loader arm assembly;
- an accumulator connected to the first feed line via a first control valve, the first control valve movable between a first position in which hydraulic fluid flow is permitted from the accumulator to the first feed line and a second position in which hydraulic fluid flow is permitted between the accumulator and the first feed line in both directions;
- a low pressure area connected to the second feed line by a second control valve, the second control valve movable

between a first position in which passage of hydraulic fluid between the second feed line and the low pressure area is prevented and a second position in which hydraulic fluid flow between the second feed line and the low pressure area is permitted in both directions; and

a hose burst check valve disposed between the first chamber and the selection valve, the check valve normally closed to prevent fluid under pressure passing from the first chamber to the selection valve, the check valve responsive to hydraulic fluid pressure in the second chamber to open the check valve to permit fluid flow from the first chamber to the selection valve when the second chamber is pressurized.

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11. The device of claim 10, wherein the ride improving hydraulic circuit is shiftable to a ride improving mode, the ride improving mode activated by shifting the first and second control valves to the second position, the first and second control valves when in the second position arranged to route hydraulic fluid to the accumulator and the low pressure area, respectively.

12. The device of claim 11, wherein the ride improving hydraulic circuit is further arranged to permit raising of the loader arm assembly when in the ride improving mode.